What is claimed is:

1. A method of making a carpet, the carpet comprising (i) a plurality of fibers attached to a primary backing material having a face and a back side and (ii) an adhesive backing material which comprises at least one homogeneously branched ethylene polymer characterized as having a single melt point as measured by differential scanning calorimetry (DSC) between -30 and 140°C and a short chain branching distribution index (SCBDI) of greater than or equal to 50 percent and which is in intimate contact with the back side of the primary backing material and has substantially penetrated and substantially consolidated the fibers, the method comprising extrusion coating the adhesive backing material onto the back side of the primary backing material and at least one additional step selected from the group consisting of

(a) preheating the primary backing material prior to the application of the adhesive backing material,

(b) during the extrusion coating of the adhesive backing material, while at a temperature greater than or equal to the softening point of the adhesive backing material, subjecting the adhesive backing material to a vacuum to draw the adhesive backing material onto the back side of the primary backing material,

(c) during the extrusion coating of the adhesive backing material, while at a temperature greater than or equal to the softening point of the adhesive backing material, subjecting the adhesive backing material to a positive air pressure device in addition to nip roll pressure to force the adhesive backing material onto the back side of the primary backing material, and

(d) heat soaking the carpet after application of the adhesive backing material onto the back side of the primary backing material.

2. A carpet comprising a primary backing material having a face and a back side, a plurality of fibers attached to the primary backing material and extending from the face of the primary backing material and exposed at the back sidee of the primary backing material, an adhesive backing material and an optional secondary backing material adjacent to the adhesive backing material, wherein the adhesive backing material comprises at least one homogeneously branched ethylene polymer characterized as having a single melt point as measured by differential scanning calorimetry (DSC) between -30 and 140°C and a short chain branching distribution index (SCBDI) of greater than or equal to 50 percent and is in intimate contact with the back surface of the primary backing material and has substantially penetrated and consolidated the fibers, and wherein the adhesive backing material or optional secondary backing material is comprised of an effective amount of at least one additive selected from the group consisting of a blowing agent and high heat content filler with the proviso that where the blowing agent is selected, the adhesive backing material or the optional secondary backing material is further characterized as having a substantially foamed, frothed or expanded non-collapsed matrix.

3. A method of making a carpet, the carpet comprising yarn attached to a primary backing material having a back side and an adhesive backing material, the adhesive backing material comprises at least one homogeneously branched ethylene polymer characterized as having a single melt point as measured by differential scanning calorimetry (DSC) at -30 and 140°C and a short chain branching distribution index (SCBDI) of greater than or equal to 50 percent, and wherein the adhesive backing material is in intimate contact with the back surface of the primary backing material and has substantially penetrated and substantially consolidated the yarn, the method comprising the step of adding an effective amount of a high heat content filler to the adhesive backing material to enhance the penetration of the adhesive backing material into the yarn.

4. A method of making a carpet, the carpet comprising yarn attached to a primary backing material having a face and a back side and an adhesive backing

material comprised of at least one first and at least one second ethylene polymer layers, wherein the first ethylene polymer layer is in intimate contact with the back surface of the primary backing material, has substantially penetrated and substantially consolidated the yarn, and has a higher melt index than the second ethylene polymer layer, the method comprising the steps of applying the first ethylene polymer layer directly onto the back side of the primary backing material and simultaneously or sequentially applying the second ethylene polymer layer onto the first ethylene polymer layer.

5. The method of Claim 4 wherein both the first and second ethylene polymer layers comprise a non-polar ethylene polymer.

6. The method of Claim 4 wherein one of the first or second ethylene polymer layers comprise an adhesive polymer.

7. A method of making carpet comprising the steps of :

providing a primary backing material;

tufting a yarn into the primary backing material to produce a carpet pile on the front side of the primary backing material and loops of the yarn on the back side of the primary backing material;

providing an aqueous dispersion of polyolefin particles;

applying the dispersion to the back side of the primary backing material;

applying heat to the dispersion to dry the dispersion and to at least partially melt the polyolefin particles and thereby fix the loops of yarn to the primary backing material.

8. The method of claim 7 wherein the particles are present in an amount between about 25 and about 50 percent by weight of the dispersion.

9. The method of claim 7 wherein the average size of the particles is between about 1 and about 1000 microns.

10. The method of claim 9 wherein the particles comprise polyethylene.

11. The method of claim 10 wherein the polyethylene has a melt index at 190°C of between about 1 and about 100.

12. The method of claim 7 wherein the dispersion comprises particles of polypropylene.

13. The method of claim 7 wherein the dispersion comprises particles of ethylene acrylic acid.

14. The method of claim 7 wherein the dispersion further comprises a surfactant.

15. The method of claim 7 wherein the dispersion further comprises a thickener.

16. The method of claim 7 wherein the step of applying heat is carried out in an oven at a temperature between about 100 and about 150 °C.

17. The method of claim 16 wherein the temperature is between about 5 and about 75 °C above the melting point of the thermoplastic particles.

18. The method of claim 7 wherein between about 6 and about 12 ounces per square yard of the polyolefin particles are applied to the back side of the primary backing.

19. The method of claim 7 wherein the yarn, the primary backing and the thermoplastic particles are all made from a polyolefin.

20. The method of claim 7 further comprising the step of applying an additional backing to the carpet by extruding a sheet of a thermoplastic material to the back side of the primary backing after the applying heat step.

21. The method of claim 20 wherein the thermoplastic material in the extruded sheet is selected from the group consisting of polyolefin, polyvinyl chloride, ethylene vinyl acetate, polyamide, polyester, and copolymers thereof.

22. The method of claim 20 wherein the thermoplastic material in the extruded sheet is a thermoplastic elastomer.

23. The method of claim 20 wherein the thermoplastic material in the extruded sheet is a homogeneously branched ethylene polymer characterized as having a single melt point as measured by differential scanning calorimetry (DSC) between -30 and 140°C and a short chain branching distribution index (SCBDI) of greater than or equal to 50 percent.

24. The carpet of Claim 23 wherein the homogeneously branched linear ethylene polymer is an interpolymer of ethylene with at least one C_3-C_{20} a-olefin.

25. The carpet of Claim 23 wherein the homogeneously branched linear ethylene polymer is a copolymer of ethylene and one C_3-C_{20} a-olefin.

26. The carpet of Claim 23 wherein the homogeneously branched linear ethylene polymer has a density in the range about 0.86 g/cc to about 0.90 g/cc.

27. The method of claim 20 wherein the thermoplastic material in the extruded sheet is a polyolefin.

28. The method of claim 20 wherein the yarn, the primary backing, the thermoplastic polymers and the extruded sheet are all made from a polyolefin.

29. The method of claim 7 further comprising the step of applying an additional backing to the carpet by applying a layer of adhesive to the back side of the primary backing and laminating a secondary backing material thereto.

30. The method of claim 29 wherein the adhesive and the secondary backing material are made from a polyolefin.

31. The method of claim 7 further comprising the step of applying an additional backing to the carpet by applying a layer of melted polyolefin on the back side of the primary backing.

32. The method of claim 7 further comprising the step of applying an additional backing to the carpet by casting a thermosettable material on the back side of the primary backing and then applying heat to set the thermosettable material.

33. A carpet comprising:

a primary backing with a face side and a back side, said primary backing being made from a polyolefin;

polyolefin yarn tufted into the primary backing so as to produce a carpet pile on the face side of the primary backing and loops of yarn on the back side of the primary backing;

polyolefin particles that have been at least partially melted around the loops of yarn on the back side of the primary backing to thereby bind the loops to the back side of the primary backing.

34. The carpet of claim 33 further comprising a secondary backing attached to back side of the primary backing, said secondary backing being made from a polyolefin.

35. The carpet of claim 34 wherein the secondary backing is attached to the primary backing through an extruded sheet of a polyolefin.

36. The carpet of claim 35 wherein the primary and secondary backing are made from polypropylene and the polyolefin particles and the extruded sheet are made from polyethylene.

37. The carpet of claim 36 wherein the carpet further includes a label or literature at the time of sale which represents that the carpet is recyclable without segregation of carpet components.

38. A method of making carpet comprising the steps of :

providing a primary backing material;

tufting a yarn into the primary backing material to produce a carpet pile on the front side of the primary backing material and loops of the yarn on the back side of the primary backing material;

extruding a first sheet of a first thermoplastic material to the back side of the primary backing; and

extruding a second sheet of a second thermoplastic material adjacent the first sheet;

wherein the melt viscosity of the thermoplastic material in the first sheet is lower than the melt viscosity of the thermoplastic material in the second sheet so as to provide for enhanced penetration of the thermoplastic material in the first sheet into at least one of the primary backing material or the loops of yarn on the back side of the primary backing material.

39. The method of claim 38 wherein the melt index at 190°C of the thermoplastic material in the first sheet is between about 30 and about 175 g/10 min. and the melt index at 190°C of the thermoplastic material in the second sheet is below the melt index of the thermoplastic material in the first sheet and is between about 1 and about 70 g/10 min.

40. The method of claim 38 wherein the melt index of the thermoplastic material in the first sheet is at least about 20 g/10 min. at 190°C lower than the melt index of the thermoplastic material in the second sheet.

41. The method of claim 38 wherein the thermoplastic material in one of the extruded sheets is a thermoplastic elastomer.

42. The method of claim 38 wherein the thermoplastic material in one of the extruded sheets is a homogeneously branched ethylene polymer.

43. The method of claim 38 wherein the thermoplastic material in the first and second extruded sheets is a homogeneously branched ethylene.

44. A carpet comprising :

primary backing material;

yarn tufted into the primary backing material to produce a carpet pile on the front side of the primary backing material and loops of the yarn on the back side of the primary backing material;

a first sheet of a thermoplastic material extruded on the back side of the primary backing; and

a second sheet of a thermoplastic material adjacent the first sheet;

wherein the melt viscosity of the thermoplastic material in the first sheet is lower than the melt viscosity of the thermoplastic material in the second sheet so as to provide for enhanced penetration of the thermoplastic material in the first sheet into at least one of the primary backing material or the loops of yarn on the back side of the primary backing material.

45. The carpet of claim 44 wherein the melt index at 190°C of the thermoplastic material in the first sheet is between about 30 and about 175 g/10 min. and the melt index at 190°C of the thermoplastic material in the second sheet

is below the melt index of the thermoplastic material in the first sheet and is between about 1 and about 70 g/10 min.

46. The carpet of claim 44 wherein the melt index of the thermoplastic material in the first sheet is at least about 20 g/10 min. at 190°C lower than the melt index of the thermoplastic material in the second sheet.

47. The carpet of claim 44 wherein the thermoplastic material in one of the extruded sheets is a thermoplastic elastomer.

48. The carpet of claim 44 wherein the thermoplastic material in one of the extruded sheets is a homogeneously branched ethylene.

49. The carpet of claim 44 wherein the thermoplastic material in the first and second extruded sheets is a homogeneously branched ethylene polymer.

50. A method of making carpet comprising the steps of :

providing a primary backing material;

tufting a yarn into the primary backing material to produce a carpet pile on the face side of the primary backing material and loops of the yarn on the back side of the primary backing material;

heating the back side of the primary material;

while the back side of the primary material is at an elevated temperature from the heating step, extruding a sheet of a thermoplastic material to the back side of the primary backing.

51. The method of claim 50 where the back side of the primary backing is heated above at least about 140 °F.

52. The method of claim 50 wherein the thermoplastic material comprises at least one homogeneously branched ethylene polymer.

53. A method of making carpet comprising the steps of :

providing a primary backing material;

tufting a yarn into the primary backing material to produce a carpet pile on the face side of the primary backing material and loops of the yarn on the back side of the primary backing material;

extruding a sheet of a thermoplastic material to the back side of the primary backing; and

while the sheet of thermoplastic material is still molten, applying a vacuum to the face side to thereby draw the molten thermoplastic material onto the back side of the primary backing.

54. The method of claim 53 where the vacuum has a draw of at least about 15 inches of H_2O.

55. The method of claim 53 wherein the thermoplastic material comprises at least one homogeneously branched ethylene polymer.

56. A method of making carpet comprising the steps of :

providing a primary backing material;

tufting a yarn into the primary backing material to produce a carpet pile on the face side of the primary backing material and loops of the yarn on the back side of the primary backing material;

extruding a sheet of a thermoplastic material to the back side of the primary backing; and

while the sheet of thermoplastic material is still molten, directing pressurized air toward the back side to thereby push the molten thermoplastic material onto the back side of the primary backing.

57. The method of claim 56 wherein the pressurized air has a pressure of at least about 20 psi.

58. The method of claim 56 wherein the thermoplastic material comprises at least one homogeneously branched ethylene polymer.

59. A method of making carpet comprising the steps of :

providing a primary backing material;

tufting a yarn into the primary backing material to produce a carpet pile on the face side of the primary backing material and loops of the yarn on the back side of the primary backing material;

extruding a sheet of a thermoplastic material to the back side of the primary backing; and

applying heat to the back side to thereby lengthen the time the extruded sheet of thermoplastic material remains molten thus enhancing the penetration of the thermoplastic material on the back side.

60. The method of claim 59 where the heat is applied for at least about 3 seconds after extrusion.

61. The method of claim 59 wherein the thermoplastic material comprises at least one homogeneously branched ethylene polymer.

62. A method of making carpet comprising the steps of :

providing a primary backing material;

tufting a yarn into the primary backing material to produce a carpet pile on the face side of the primary backing material and loops of the yarn on the back side of the primary backing material;

extruding a sheet of a thermoplastic material to the back side of the primary backing;

prior to the extruding step, treating at least the back side of the primary backing and loops of the yarn on the back side of the primary backing to remove undesirable chemicals from the surface and thereby enhance the adhesion of the extruded sheet.

63. The method of claim 62 wherein the treating step includes an aqueous washing.

64. The method of claim 62 wherein the thermoplastic material comprises at least one homogeneously branched ethylene polymer.

65. A method of making carpet comprising the steps of :

providing a primary backing material;

tufting a yarn into the primary backing material to produce a carpet pile on the face side of the primary backing material and loops of the yarn on the back side of the primary backing material; and

extruding a molten sheet of a thermoplastic material to the back side of the primary backing; and

allowing the sheet of a thermoplastic material to solidify to thereby fix the loops of the yarn to the back side of the primary backing;

wherein the sheet of thermoplastic material includes an inorganic filler having a specific heat and in an amount sufficient to lengthen the solidification time of the molten sheet and thereby enhance penetration of the thermoplastic material.

66. The method of claim 65 wherein the inorganic filler is selected from the group consisting of calcium carbonate, barium sulfate, aluminum trihydrate, and talc, together with mixtures thereof.

67. The method of claim 65 wherein the inorganic filler calcium carbonate.

68. The method of claim 65 wherein the inorganic filler is present at between about 1 and about 75 weight percent of the thermoplastic material in the extruded sheet.

69. A method of making carpet comprising the steps of :

providing a primary backing material;

tufting a yarn into the primary backing material to produce a carpet pile on the face side of the primary backing material and loops of the yarn on the back side of the primary backing material;

extruding a molten sheet of a thermoplastic material to the back side of the primary backing, wherein the sheet of thermoplastic material includes an effective amount of at least one blowing agent; and

activating the at least one blowing agent to expand the thermoplastic material.

70. The method of claim 69 wherein the inorganic filler is selected from the group consisting of calcium carbonate, barium sulfate, aluminum trihydrate, and talc, together with mixtures thereof.

71. The method of claim 69 wherein the inorganic filler calcium carbonate.

72. The method of claim 69 wherein the inorganic filler is present at between about 1 and about 75 weight percent of the thermoplastic material in the extruded sheet.

73. A method of making carpet comprising the steps of :

providing a primary backing material;

tufting a yarn into the primary backing material to produce a carpet pile on the front side of the primary backing material and loops of the yarn on the back side of the primary backing material;

extruding a sheet of a first thermoplastic material to the back side of the primary backing; and

laminating a secondary backing material to the extruded sheet;

wherein the secondary backing comprises a material with fibers protruding therefrom to thereby enhance adhesion of the carpet to a floor.

74. The method of claim 73 wherein the secondary backing comprises a woven or non-woven fabric with fibers needle-punched therein.

75. The method of claim 74 wherein the secondary backing includes between about .5 and about 3 oz. of fibers per yard of secondary backing.

76. The method of claim 74 wherein the fibers comprise polypropylene.

77. The method of 73 wherein the secondary backing comprises a spun-bond non-woven fabric.

78. A method of making carpet comprising the steps of :

providing a primary backing material;

tufting a yarn into the primary backing material to produce a carpet pile on the front side of the primary backing material and loops of the yarn on the back side of the primary backing material;

extruding a sheet of a first thermoplastic material to the back side of the primary backing; and

laminating a secondary backing material to the extruded sheet, said secondary backing comprising a leno weave fabric with monofilament strands in the machine and cross directions.

79. The method of claim 78 wherein the secondary backing is made of polypropylene.

80. A carpet comprising a primary backing material having a face and a back side, a plurality of fibers attached to the primary backing material and extending from the face of the primary backing material and exposed at the back side of the primary backing material, an adhesive backing material and an optional secondary backing material adjacent to the adhesive backing material, wherein the adhesive backing material comprises at least one homogeneously branched linear

ethylene polymer characterized as having a single melt point as measured by differential scanning calorimetry (DSC) between -30 and 140°C and a short chain branching distribution index (SCBDI) of greater than or equal to 50 percent and is in intimate contact with the back surface of the primary backing material and has substantially penetrated and consolidated the fibers, and wherein the adhesive backing material or optional secondary backing material is comprised of an effective amount of at least one additive selected from the group consisting of a blowing agent and high heat content filler with the proviso that where the blowing agent is selected, the adhesive backing material or the optional secondary backing material is further characterized as having a substantially foamed, frothed or expanded non-collapsed matrix.

81. A method of making a carpet, the carpet comprising yarn attached to a primary backing material having a back side and an adhesive backing material, the adhesive backing material comprises at least one homogeneously branched ethylene polymer characterized as having a single melt point as measured by differential scanning calorimetry (DSC) at -30 and 140°C and a short chain branching distribution index (SCBDI) of greater than or equal to 50 percent, and wherein the adhesive backing material is in intimate contact with the back surface of the primary backing material and has substantially penetrated and substantially consolidated the yarn, the method comprising the step of adding an effective amount of a high heat content filler to the adhesive backing material to enhance the penetration of the adhesive backing material into the yarn.

82. The method of Claim 81 wherein the inorganic filler is selected from the group consisting of calcium carbonate, barium sulfate, aluminum trihydrate, and talc, together with mixtures thereof.

83. The method of Claim 81 wherein the inorganic filler calcium carbonate.

84. The method of Claim 81 wherein the inorganic filler is present at between about 1 and about 75 weight percent based on the total weight of the at least one homogeneously branched ethylene polymer.

85. A method of making a carpet, the carpet having a foamed, frothed or expanded adhesive backing material and comprising yarn attached to a primary backing material having a face and back side, the adhesive backing material comprising at least one ethylene polymer and is in intimate contact with the back side of the primary backing material and has substantially penetrated and substantially consolidated the yarn, the method comprising the step of adding an effective amount of at least one blowing agent to the adhesive backing material and thereafter activating the blowing agent to foam, froth or expand the adhesive backing material.

86. The method of Claim 85 wherein the at least one ethylene polymer is a homogeneously branched linear ethylene polymer.

87. The method of Claim 86 wherein the homogeneously branched linear ethylene polymer is an interpolymer of ethylene with at least one C_3-C_{20} a-olefin.

88. The method of Claim 87 wherein the C_3-C_{20} a-olefin is selected from the group consisting of propylene, 1-butene, 1-isobutylene, 1-pentene, 1-hexene, 4-methyl-1-pentene, 1-heptene and 1-octene.

89. The method of Claim 86 wherein the homogeneously branched linear ethylene polymer is characterized as having a single melt point as measured by differential scanning calorimetry (DSC) between -30 and 140°C and a short chain branching distribution index (SCBDI) of greater than or equal to 50 percent.

90. The method of Claim 89 wherein the homogeneously branched linear ethylene polymer has a density in the range about 0.86 g/cc to about 0.90 g/cc.

91. A method of making carpet comprising the steps of:

providing a primary backing material;

tufting a yarn into the primary backing material to produce a carpet pile on the face side of the primary backing material and loops of the yarn on the back side of the primary backing material;

extruding a molten sheet of a thermoplastic material to the back side of the primary backing, wherein the sheet of thermoplastic material includes an effective amount of at least one blowing agent; and

activating the at least one blowing agent to expand the thermoplastic material.

92. The method of Claim 91 wherein the thermoplastic material is a homogeneously branched linear ethylene polymer.

93. The method of Claim 92 wherein the homogeneously branched linear ethylene polymer has a density in the range about 0.86 g/cc to about 0.90 g/cc.

94. A carpet comprising a primary backing material having a face and a back side, a plurality of fibers attached to the primary backing material and extending from the face of the primary backing material and exposed at the back side of the primary backing material, an adhesive backing material and an optional secondary backing material adjacent to the adhesive backing material, wherein the adhesive backing material comprises at least one substantially linear ethylene polymers characterized as having

(a) a melt flow ratio, $I_{10}/I_2 \geq 5.63$,

(b) a molecular weight distribution, M_w/M_n, as determined by gel permeation chromatography and defined by the equation:

$$(M_w/M_n) \leq (I_{10}/I_2) - 4.63,$$

(c) a gas extrusion rheology such that the critical shear rate at onset of surface melt fracture for the substantially linear ethylene polymer is at least 50 percent greater than the critical shear rate at the onset of surface melt fracture for a linear ethylene polymer, wherein the linear ethylene polymer has a homogeneously branched short chain branching distribution and no long chain branching, and wherein the substantially linear ethylene polymer and the linear ethylene polymer are simultaneously ethylene homopolymers or interpolymers of ethylene and at least one C_3-C_{20} a-olefin and have essentially the same I_2 and M_w/M_n and wherein the respective critical shear rates of the substantially linear ethylene polymer and the linear ethylene polymer are measured at the same melt temperature using a gas extrusion rheometer,

(d) a single differential scanning calorimetry, DSC, melting peak between -30 and 140°C, and

(e) a short chain branching distribution index (SCBDI) of greater than or equal to 50 percent

and is in intimate contact with the back surface of the primary backing material and has substantially penetrated and consolidated the fibers, and wherein the adhesive backing material or optional secondary backing material is comprised of an effective amount of at least one additive selected from the group consisting of a blowing agent and high heat content filler with the proviso that where the blowing agent is selected, the adhesive backing material or the optional secondary backing material is further characterized as having a substantially foamed, frothed or expanded non-collapsed matrix.

95. A method of making a carpet, the carpet comprising yarn attached to a primary backing material having a back side and an adhesive backing material, the adhesive backing material comprises at least one substantially linear ethylene polymers characterized as having

(a) a melt flow ratio, $I_{10}/I_2 \geq 5.63$,

(b) a molecular weight distribution, M_w/M_n, as determined by gel permeation chromatography and defined by the equation:

$$(M_w/M_n) \leq (I_{10}/I_2) - 4.63,$$

(c) a gas extrusion rheology such that the critical shear rate at onset of surface melt fracture for the substantially linear ethylene polymer is at least 50 percent greater than the critical shear rate at the onset of surface melt fracture for a linear ethylene polymer, wherein the linear ethylene polymer has a homogeneously branched short chain branching distribution and no long chain branching, and wherein the substantially linear ethylene polymer and the linear ethylene polymer are simultaneously ethylene homopolymers or interpolymers of ethylene and at least one C_3-

C_{20} a-olefin and have essentially the same I_2 and M_w/M_n and wherein the respective critical shear rates of the substantially linear ethylene polymer and the linear ethylene polymer are measured at the same melt temperature using a gas extrusion rheometer,

(d) a single differential scanning calorimetry, DSC, melting peak between -30 and 140°C, and

(e) a short chain branching distribution index (SCBDI) of greater than or equal to 50 percent,

and wherein the adhesive backing material is in intimate contact with the back surface of the primary backing material and has substantially penetrated and substantially consolidated the yarn, the method comprising the step of adding an effective amount of a high heat content filler to the adhesive backing material to enhance the penetration of the adhesive backing material into the yarn.

96. The method of Claim 95 wherein the inorganic filler is selected from the group consisting of calcium carbonate, barium sulfate, aluminum trihydrate, and talc, together with mixtures thereof.

97. The method of Claim 95 wherein the inorganic filler calcium carbonate.

98. The method of Claim 95 wherein the inorganic filler is present at between about 1 and about 75 weight percent based on the total weight of the at least one substantially linear ethylene polymer.

99. A method of making a carpet, the carpet having a foamed, frothed or expanded adhesive backing material and comprising yarn attached to a primary backing material having a face and back side, the adhesive backing material comprising at least one ethylene polymer and is in intimate contact with the back side

of the primary backing material and has substantially penetrated and substantially consolidated the yarn, the method comprising the step of adding an effective amount of at least one blowing agent to the adhesive backing material and thereafter activating the blowing agent to foam, froth or expand the adhesive backing material.

100. The method of Claim 99 wherein the at least one ethylene polymer is a substantially linear ethylene polymers characterized as having

(a) a melt flow ratio, $I_{10}/I_2 \geq 5.63$,

(b) a molecular weight distribution, M_w/M_n, as determined by gel permeation chromatography and defined by the equation:

$$(M_w/M_n) \leq (I_{10}/I_2) - 4.63,$$

(c) a gas extrusion rheology such that the critical shear rate at onset of surface melt fracture for the substantially linear ethylene polymer is at least 50 percent greater than the critical shear rate at the onset of surface melt fracture for a linear ethylene polymer, wherein the linear ethylene polymer has a homogeneously branched short chain branching distribution and no long chain branching, and wherein the substantially linear ethylene polymer and the linear ethylene polymer are simultaneously ethylene homopolymers or interpolymers of ethylene and at least one C_3-C_{20} a-olefin and have essentially the same I_2 and M_w/M_n and wherein the respective critical shear rates of the substantially linear ethylene polymer and the linear ethylene polymer are measured at the same melt temperature using a gas extrusion rheometer,

(d) a single differential scanning calorimetry, DSC, melting peak between -30 and 140°C, and

(e) a short chain branching distribution index (SCBDI) of greater than or equal to 50 percent.

101. The method of Claim 100 wherein the substantially linear ethylene polymer is an interpolymer of ethylene with at least one C_3-C_{20} a-olefin.

102. The method of Claim 100 wherein the substantially linear ethylene polymer is a copolymer of ethylene and 1-octene.

103. The method of Claim 101 wherein the at least one C_3-C_{20} a-olefin is selected from the group consisting of propylene, 1-butene, 1-isobutylene, 1-pentene, 1-hexene, 4-methyl-1-pentene, 1-heptene and 1-octene.

104. The method of Claim 103 wherein the substantially linear ethylene polymer has a density in the range about 0.86 g/cc to about 0.90 g/cc.

105. A method of making carpet comprising the steps of:

providing a primary backing material having a face and a back side;

tufting a yarn into the primary backing material to produce a carpet pile on the face side of the primary backing material and loops of the yarn on the back side of the primary backing material;

extruding a molten sheet of a thermoplastic material to the back side of the primary backing, wherein the sheet of thermoplastic material includes an effective amount of at least one blowing agent; and

activating the at least one blowing agent to expand the thermoplastic material.

106. The method of Claim 105 wherein the thermoplastic material is a substantially linear ethylene polymers characterized as having

(a) a melt flow ratio, $I_{10}/I_2 \geq 5.63$,

(b) a molecular weight distribution, M_w/M_n, as determined by gel permeation chromatography and defined by the equation:

$$(M_w/M_n) \leq (I_{10}/I_2) - 4.63,$$

(c) a gas extrusion rheology such that the critical shear rate at onset of surface melt fracture for the substantially linear ethylene polymer is at least 50 percent greater than the critical shear rate at the onset of surface melt fracture for a linear ethylene polymer, wherein the linear ethylene polymer has a homogeneously branched short chain branching distribution and no long chain branching, and wherein the substantially linear ethylene polymer and the linear ethylene polymer are simultaneously ethylene homopolymers or interpolymers of ethylene and at least one C_3-C_{20} a-olefin and have essentially the same I_2 and M_w/M_n and wherein the respective critical shear rates of the substantially linear ethylene polymer and the linear ethylene polymer are measured at the same melt temperature using a gas extrusion rheometer,

(d) a single differential scanning calorimetry, DSC, melting peak between -30 and 140°C, and

(e) a short chain branching distribution index (SCBDI) of greater than or equal to 50 percent.

107. The method of Claim 106 wherein the substantially linear ethylene polymer has a density in the range about 0.86 g/cc to about 0.90 g/cc.

108. A carpet tile comprising:

a primary backing with a face side and a back side, said primary backing being made from a polyolefin;

polyolefin yarn tufted into the primary backing so as to produce a carpet pile on the face side of the primary backing and loops of yarn on the back side of the primary backing;

an adhesive layer of a polyolefin at least partially penetrating the primary backing, the loops of yarn on the back side of the primary backing or both.

109. The carpet tile of claim 108 further comprising a secondary backing fabric which is laminated to the adhesive layer.

110. The carpet tile of claim 109 wherein the secondary backing fabric is a non-woven material made from a polyolefin.

111. The carpet tile of claim 109 wherein the secondary backing fabric is a spun-bond polyolefin.

112. The carpet tile of claim 109 wherein the secondary backing fabric comprises fibers needle-punched therein.

113. The carpet tile of claim 109 further comprising a second adhesive backing layer.

114. The carpet tile of claim 113 further comprising a layer of reinforcing material embedded between the adhesive backing layer and the second adhesive backing layer.

115. The carpet tile of claim 114 wherein the reinforcing material is a non-woven polyolefin fabric.

116. The carpet tile of claim 114 wherein the reinforcing material is a fiberglass scrim.

117. The carpet tile of claim 113 wherein the adhesive backing layer and the second adhesive backing layer both contain an inorganic filler.

118. The carpet tile of claim 117 wherein the second adhesive backing layer contains a higher level of inorganic filler than the adhesive backing layer.

119. The carpet tile of claim 118 wherein the second adhesive backing layer contains between about 30 and about 80 percent by weight inorganic filler and the adhesive backing layer contains between about 0 and about 60 percent by weight inorganic filler.

120. The carpet tile of claim 113 wherein the weight of the adhesive layer and the second adhesive layer combined is between about 20 and about 100 osy.

121. The carpet tile of claim 108 wherein the adhesive backing layer comprises an additive to increase the adhesiveness of the layer.

122. A carpet tile comprising:

a primary backing with a face side and a back side;

yarn tufted into the primary backing so as to produce a carpet pile on the face side of the primary backing and loops of yarn on the back side of the primary backing;

a first polymeric layer extruded onto the back side of the primary backing and the loops of yarn on the back side of the primary backing;

a reinforcing fabric adjacent the first polymeric adhesive layer; and

a second polymeric layer extruded onto the reinforcing fabric.

123. The carpet tile of claim 122 wherein the primary backing, the yarn, the first polymeric and second polymeric layer and the reinforcing fabric are all made from a polyolefin.

124. The carpet tile of claim 122 further comprising a secondary backing fabric which is laminated to the second polymeric layer.

125. The carpet tile of claim 124 wherein the secondary backing fabric is a non-woven material made from a polyolefin.

126. The carpet tile of claim 125 wherein the secondary backing fabric is a spun-bond polyolefin.

127. The carpet tile of claim 124 wherein the secondary backing fabric comprises fibers needle-punched therein.

128. The carpet tile of claim 122 wherein the reinforcing material is a non-woven polyolefin fabric.

129. The carpet tile of claim 122 wherein the reinforcing material is a fiberglass scrim.

130. The carpet tile of claim 122 wherein the first and second polymeric layer both contain an inorganic filler.

131. The carpet tile of claim 130 wherein the second polymeric layer contains a higher level of inorganic filler than the first polymeric layer.

132. The carpet tile of claim 131 wherein the second adhesive backing layer contains between about 30 and about 80 percent by weight inorganic filler and the adhesive backing layer contains between about 0 and about 60 percent by weight inorganic filler.

133. The carpet tile of claim 122 wherein the weight of the first and second polymeric combined is between about 20 and about 100 osy.

134. The carpet tile of claim 122 wherein the first polymeric layer comprises an additive to increase the adhesiveness of the layer.

135. A method of making a carpet tile comprising the steps

providing a primary backing with a face side and a back side, said primary backing being made from a polyolefin;

tufting a polyolefin yarn into the primary backing so as to produce a carpet pile on the face side of the primary backing and loops of yarn on the back side of the primary backing;

extruding an adhesive layer of a polyolefin onto the back side of the primary backing so as to at least partially penetrate the primary backing, the loops of yarn on the back side of the primary backing or both to make a carpet; and

cutting the carpet into tiles.

136. The method of claim 135 further comprising the step of laminating a secondary backing fabric to the adhesive layer.

137. The method of claim 136 wherein the secondary backing fabric is a non-woven material made from a polyolefin.

138. The method of claim 137 wherein the secondary backing fabric is a spun-bond polyolefin.

139. The method of claim 135 wherein the secondary backing fabric comprises fibers needle-punched therein.

140. The method of claim 135 further comprising the step of extruding a second adhesive backing layer.

141. The method of claim 140 further comprising the step of embedding a layer of reinforcing material between the adhesive backing layer and the second adhesive backing layer.

142. The method of claim 141 wherein the reinforcing material is a non-woven polyolefin fabric.

143. The method of claim 141 wherein the reinforcing material is a fiberglass scrim.

144. The method of claim 140 wherein the adhesive backing layer and the second adhesive backing layer both contain an inorganic filler.

145. The method of claim 144 wherein the second adhesive backing layer contains a higher level of inorganic filler than the adhesive backing layer.

146. The method of claim 145 wherein the second adhesive backing layer contains between about 30 and about 80 percent by weight inorganic filler and the adhesive backing layer contains between about 0 and about 60 percent by weight inorganic filler.

147. The method of claim 140 wherein the weight of the adhesive layer and the second adhesive layer combined is between about 20 and about 100 osy.

148. The method of claim 135 wherein the adhesive backing layer comprises an additive to increase the adhesiveness of the layer.

149. A method of making carpet tile comprising:

providing a primary backing with a face side and a back side;

tufting yarn into the primary backing so as to produce a carpet pile on the face side of the primary backing and loops of yarn on the back side of the primary backing;

extruding a first polymeric layer onto the back side of the primary backing and the loops of yarn on the back side of the primary backing;

placing a reinforcing fabric adjacent the first polymeric adhesive layer; and

extruding a second polymeric layer onto the reinforcing fabric.

150. The method of claim 149 wherein the primary backing, the yarn, the first polymeric and second polymeric layer and the reinforcing fabric are all made from a polyolefin.

151. The method of claim 149 further comprising laminating a secondary backing fabric to the second polymeric layer.

152. The method of claim 151 wherein the secondary backing fabric is a non-woven material made from a polyolefin.

153. The method of claim 152 wherein the secondary backing fabric is a spun-bond polyolefin.

154. The method of claim 151 wherein the secondary backing fabric comprises fibers needle-punched therein.

155. The method of claim 149 wherein the reinforcing material is a non-woven polyolefin fabric.

156. The method of claim 149 wherein the reinforcing material is a fiberglass scrim.

157. The method of claim 149 wherein the first and second polymeric layer both contain an inorganic filler.

158. The method of claim 157 wherein the second polymeric layer contains a higher level of inorganic filler than the first polymeric layer.

159. The method of claim 158 wherein the second adhesive backing layer contains between about 30 and about 80 percent by weight inorganic filler and the adhesive backing layer contains between about 0 and about 60 percent by weight inorganic filler.

160. The method of claim 149 wherein the weight of the first and second polymeric combined is between about 20 and about 100 osy.

161. The method of claim 149 wherein the first polymeric layer comprises an additive to increase the adhesiveness of the layer.